CLAIMS

1. A sensing device comprising:

a) physiological sensing means; and

b) locating means to locate the sensing means inside an ear canal ;

characterised in that the locating means is provided with an aperture which, when the sensing device is fitted in the ear canal, allows motion of the air in and out of the ear canal.

2. A sensing device according to claim 1 wherein the locating means is substantially U-shaped and the aperture is defined by the trough between each arm of the U.

3. A sensing device according to claim 1 or claim 2 wherein the locating means is made of pliable material and can be adapted to fit comfortably within the ear canal.

4. A sensing device according to claim 3 wherein the locating means is made of silicone or any other like material.

5. A sensing device according to any of the preceding claims wherein the locating means is provided with adjusting means such that one device can be comfortably accommodated by a multiplicity of different users.

6. A sensing device according to any of the preceding claims wherein the physiological sensing means comprises pulse oximetry optical transmitters and receiver.

7. A sensing device according to any of the preceding claims wherein the locating means has a thermal conducting heat transfer tip.

8. A sensing device according to claim 7 wherein the physiological sensing means also comprises a temperature sensor in contact with said heat transfer tip on the locating means.

9. A sensing device according to any of the preceding claims wherein the sensing device is provided with securing means to secure the device to the ear of a user.

10. A sensing device according to claim 9 wherein the securing means comprises an ear clip which partially or completely surrounds the ear.

11. A sensing device according to claim 9 or claim 10 wherein the securing means are designed to go around the top or bottom of the ear.

12. A sensing device according to any of the preceding claims and further comprising audio communication means wherein the audio communication means comprise a speaker and a microphone and the speaker and/or microphone is located within a vibration absorbent material.

13. A sensing device according to claim 12 wherein the absorbent material is a soft silicone sealant type material.

14. A sensing device according to claim 13 wherein the absorbent material is a thermoplastic elastomer or thermoset silicone.

15. A sensing device according to any of claims 12 to 14 wherein the absorbent material has a sure hardness of 30 to 60 %.